Objective: To demonstrate the safety and efficacy of balloon mitral valvuloplasty in patients of rheumatic mitral stenosis and situs inversus with dextrocardia.
Background: Distorted cardiac anatomy and cardiac malpositions increase the complications of interatrial septal puncture and left ventricular entry during balloon mitral valvuloplasty.
Methods: Five patients with rheumatic mitral stenosis and situs inversus with dextrocardia were included in this study. Mean transmitral gradient before balloon mitral valvuloplasty (18 ± 6 mmHg) was significantly higher, while mitral valve area (MVA) (0.68 ± 0.4 cm^2) was significantly lower. All the five patients were young (mean age of 32 years) and symptomatic (mean pulmonary artery pressure 60 ± 10 mmHg). Left femoral venous and arterial approach was used. Fluoroscopic imaging was performed without inverting the images although the software for the same was available. The interatrial septum was approached using fluoroscopy guide with needle directed towards the spine and keeping the pointer of Brockenbrough needle at seven to eight O' clock position followed by transatrial puncture in left lateral view. The transit across the mitral valve was done in left anterior oblique view without using pseudo right anterior oblique imaging with just clockwise or counter clockwise guidewire movement. Simultaneous transthoracic echocardiography guidance was used.
Results: Pre and post balloon mitral valvuloplasty hemodynamic parameters were compared. Mean transmitral gradient before balloon mitral valvuloplasty (18 ± 6 mmHg) was significantly higher, while mitral valve area (MVA) (0.68 ± 0.4 cm^2) was significantly lower. All the five patients were young (mean age of 32 years) and symptomatic (mean PA pressure 60 ± 10 mmHg. After balloon mitral valvuloplasty, mean PA pressure was significantly reduced – [33.5 ± 12 mmHg], with a significant reduction in transmitral gradient (8.2 ± 3.5 mmHg), with an increase in mitral valve area (2.1 ± 0.6 cm^2).
Conclusion: This case series demonstrates the safety and efficacy of balloon mitral valvuloplasty without inverting the images on fluoroscopy.

Mitral valve repair – Is replacement not an ideal operation anymore?

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Introduction: MV repair remains standard of care in the world today. It is different in India with RHD. MV repair summary data by a single surgeon is presented here.
Methods: Prospective data on all MV repairs since 01/2004. Patients were regularly followed up and those unable to come were subject to a telephonic interview along with review of their latest ECHO report.
Results: 163 patients underwent MV repair between 01/2004 and 06/2015. The mean age of patients was 40 years (range 8–81). 58 (36%) were female patients. 70 (43%) were RHD patients, 40 (25%) degenerative mitral valve disease, 34 (21%) ischemic MR, 15(9%) congenital MV disease, 2(1%) with SBE and 2(1%) with other aetiologies. Majority (144, 88%) patients had NYHA class III and above symptoms. The mean EF was 53% (min 25% and max 79%). 10(6%) patients had incidental mild to severe MS while the rest had Grade 3 and above regurgitation. Meanpreop mitral annulus diameter was 38 mm (Min 23, Max 50). More than moderate PA pressures were present in 69 (42%) patients. All procedures were performed via median sternotomy. The complexity of the repair was reflected on the number of techniques needed to achieve competence. On an average, at least 2 techniques were necessary, while some patients needed as many as 6. Average follow up was 18 months in the cohort. The maximum follow up time was 96 months. 44 patients were lost to follow up. There were 2 deaths in the whole dataset, 1 was post operative mortality and one at 12 months follow up. Three patients had significant mitral regurgitation on follow up, one of whom has been reoperated. All of these patients were RHD.
Conclusion: Mitral valve repair, in expert hands provides good long term outcome, free from reoperation. Moreover morbidity and mortality related to anticoagulant therapy was significantly minimized

Acute and short term effect of balloon mitral valvuloplasty on p wave dispersion and atrial electro-mechanical delay in subjects of mitral stenosis

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Background: The predisposition to atrial fibrillation (AF) in mitral stenosis (MS) has been demonstrated with several electrocardiographic (increased P-wave dispersion) and echocardiographic parameters (atrial electromechanical delay). The effect of percutaneous balloon mitral valvuloplasty (PBMV) on these parameters and the onset of AF later have not been studied in detail till now.
Aim of the study: Acute (within 48 h) and short term (at 6 months) effect of PBMV on P-wave dispersion (PWD) and atrial Electro-Mechanical Delay (EMD) in patients of Mitral Stenosis and sinus rhythm.
Method: 34 patients of MS have been studied till date with follow up of 8 patients (study is ongoing and full data will be presented in conference). 12 lead ECG and detailed Echocardiographic evaluation was done for each patient one day before, at 48 hours after PBMV and at 6 months. The P-wave dispersion was calculated from12-lead ECG. Interatrial and intra-atrial EMDs were measured by tissue Doppler echocardiography. These ECG and echocardiographic parameters after PMBV were compared with baseline values. Additionally at 6 months 24 hour Holter monitoring has be planned to rule out paroxysmal AF.
Result: 34 patients of critical MS who underwent successful BMV have been studied till date (24 females and 10 males, aged mean 28.74 ± 8.55 years, with a mean MVA of 0.75 ± 0.15 cm^2). After PMBV, there was significant improvement in the interatrial EMD (46.03 ± 18.36 ms vs. 62.00 ± 28.11, $p < 0.01$) and left-sided intra-atrial EMD (34.65 ± 16.94 vs.49.32 ± 30.14, $p < 0.01$) compared to baseline with no significant change in right sided intraatrial EMD (16.41 ± 17.86 vs 15.65 ± 13.34, $p = 0.854$). There was also significant decrease in PWD following PBMV compared to baseline (34.12 ± 12.74 vs 41.88 ± 15.82, $p < 0.01$). In 8 patients who have completed 6 months follow up, there was tendency of further decrease in left sided EMD with no patient developing AF.

Study role of echocardiographic TDI (tissue Doppler imaging) and strain imaging for detection of subclinical LV dysfunction in patients of rheumatic mitral valve disease

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